CLAIMS

1. Winch of the type known as capstan, comprising at least two drums arranged opposite one another drawing a load through the medium of a cable wound on the said drums in a predetermined number of turns, characterized in that each of the said drums (2, 3) comprises a peripheral wall (22, 32) and is equipped with a predetermined number of peripheral rings (40-45, 50-55) of elastic material, independent of one another, strung around the said peripheral wall (22, 32), in that the said peripheral rings (40-45, 50-55) are provided each with a peripheral throat (440, 450) intended to receive the said cable (C) and in that the elastic material constituting the said peripheral rings (40-45, 50-55) possesses physico-chemical characteristics such that it permits, at one time, a drawing of the said cable (C) and a relative sliding between a lower wall (441, 451) of the said peripheral rings (40-45, 50-55) in contact with the said peripheral wall (22, 32) of the drums (2, 3) and this wall (441, 451), the said relative sliding being of an amplitude substantially equal to the longitudinal deformations undergone by the said cable (C), when it is subjected to tensions of variable amplitudes.

2. Winch according to claim 1, characterized in that each of the said drums (2, 3) is equipped with a pair of lateral rings (21a-21b, 31a-31b), in that at least one of the lateral rings (21a-21b, 31a-31b) of each pair is removable so as to permit the positioning of the said peripheral rings (40-45,50-55) around the said peripheral wall (22, 32) of the drums, or their withdrawal.

3. Winch according to any one of the foregoing claims, characterized in that the said peripheral rings (40-45,50-55) are made of a synthetic material.

4. Winch according to any one of the foregoing claims, characterized in that the said peripheral walls (22, 32) of the drums (2, 3) are made of stainless steel or of ceramic coated steel.

5. Winch according to any one of claims 1 to 4, characterized in that the distance (p) between the throats (440, 450) of two adjacent rings (44, 45) of the same drum (2, 3) defines one step of value p, in that each of the said drums (2, 3) revolves about

an axis of rotation (Δ_1, Δ_2), and in that the said drums (2, 3) are spaced apart axially, one in relation to the other, by a fraction of said pitch (*d*).

6. Winch according to claim 5, characterized in that the said fraction is equal to one half-pitch (*p*/2).

7. Winch according to any one of claims 1 to 4, characterized in that each of the said drums (2, 3) turns on an axis of rotation (Δ'_1, Δ'_2) and in that the said axes of rotation (Δ'_1, Δ'_2) form between them an angle (**a**) greater than zero.

8. Winch according to claim 7, characterized in that the said angle (**a**) is between 0.5° and 3°.

9. Application of a winch (C) according to any one of the foregoing claims to petroleum searching in deep water.